

# HP Factory-Installed Operating System Software for Red Hat Enterprise Linux ES 3 User Guide



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User Guide

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# Contents

<b>Introduction .....</b>	<b>5</b>
<b>Completing the Installation of the Operating System .....</b>	<b>6</b>
Powering Up the Server.....	6
Configuring the Server .....	7
Root Password .....	7
Networking .....	7
Time Zone.....	7
User Information.....	7
Password Authentication .....	7
Services.....	8
Linux ProLiant Support Packs .....	8
Additional Configuration Settings .....	9
Automatic Partitioning .....	10
<b>Post-Installation Tasks .....</b>	<b>10</b>
Changing the Display Settings .....	10
Altering the Regional Settings.....	11
Configuring Array Controllers .....	11
Web-Based Array Configuration Utility.....	12
Configuring Additional NICs .....	12
Installing Additional Options .....	12
Creating an Emergency Boot Diskette .....	13
Powering Down the Server.....	13
<b>Troubleshooting .....</b>	<b>14</b>
Software Technical Support .....	14
Reinstalling the Operating System .....	15
Getting Help .....	16
HP Website .....	16
Telephone Numbers .....	16



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**IMPORTANT:** This guide provides instructions to complete the installation of a factory-installed operating system. If your operating system has been factory-installed, do **not** boot the server from the HP SmartStart CD when powering up the server for the first time. The SmartStart CD should only be used to reinstall the operating system.

## Introduction

This guide provides instructions for completing the installation of the factory-installed Red Hat Enterprise Linux® ES 3 Update 1 operating system subscription. The Red Hat Enterprise Linux ES 3 Update 1 operating system is ready for use after the instructions in this guide have been completed.

With your Red Hat Enterprise Linux ES 3 subscription from HP, you are entitled to software updates and new Red Hat Enterprise Linux versions from the Red Hat Enterprise Network during either the 1-year or 3-year subscription period, depending on which option you purchased. You must register your 16-digit identification number included in your media kit to access these services.

Software technical support from HP Customer Service for Red Hat Enterprise Linux ES 3 is also included for the same subscription period and includes:

- Three incidents and resolutions per server for one year
- Phone-based support with 9-to-5 service coverage hours in your local time zone
- Two-hour guaranteed response time

The HP factory-installed software for Red Hat Enterprise Linux ES 3 is ready to run. The operating system is preinstalled and preconfigured with all the necessary drivers to run out of the box. During the initial boot-up, the factory-installed software:

- Automatically installs the HP Health and Wellness Driver for Linux, which monitors critical operational data to ensure that the ProLiant server is functioning properly
- Enables the operating system and customizes the server configuration

For additional information about Red Hat Linux operating systems, refer to <http://www.redhat.com>.

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# Completing the Installation of the Operating System

This section provides instructions for initially booting up the server and completing the installation of the operating system.

**IMPORTANT:** Before powering up the server, connect the server hardware as described in the server documentation.

## Powering Up the Server

Carefully follow the online prompts, making keyboard or mouse entries only when prompted by the system.

**IMPORTANT:** All commands are case-sensitive. Enter all commands exactly as shown.

To enable the operation of the factory-installed operating system:

1. Power up the server.
2. Click **Forward** to continue at the HP Welcome screen. The server software license screen appears.
3. Read all software license agreements provided with the server.
4. If you agree with the terms and conditions of the license agreements, select **I agree** and click **OK**.

The server reboots and the operating system configuration begins.

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## **Configuring the Server**

Determine the following configuration settings when prompted. If you are not familiar with the configuration options, refer to the Red Hat Enterprise Linux documentation included with your server for additional information.

### **Root Password**

At the New Password prompt, establish a password for the root user account. If the root password is not successfully changed at this time, the default root password is set to `Invent`.

### **Networking**

Configure the primary NIC at the Setup Networking screen.

### **Time Zone**

Select the appropriate time zone for your server at the Configure Timezones screen. You also have the option of operating the hardware clock based on your local time zone or Greenwich Mean Time (GMT). Setting the hardware clock to GMT is recommended to avoid any problems during daylight savings time changes.

### **User Information**

Select **Network Information Service (NIS)**, **Lightweight Directory Access Protocol (LDAP)**, or **Hesiod Directory Services** at the User Information screen.

### **Password Authentication**

Establish the password authentication settings for the server at the Authentication Configuration screen. The recommended default settings enable the use of Shadow and MD5 passwords.

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## Services

Select the services that you want enabled on the server. All of the selected services are enabled for runlevels three and five, and `xinetd` services are also enabled. The settings for a specific runlevel can be changed after the operating system installation is complete by using the `chkconfig` tool. Refer to the `chkconfig` man page for more details.

## Linux ProLiant Support Packs

Linux ProLiant Support Packs (PSPs) are automatically installed with the operating system. Certain configuration steps must be completed to ensure successful installation of the PSPs and that HP Management Agents function properly.

1. Log in as `root`. The HP ProLiant Linux Deployment Utility screen appears.
2. If you want to use HP Management Agents:
  - a. Select **HP Server Management Drivers and Agents for Red Hat Enterprise Linux**.
  - b. Right-click to display the available actions, and select **Configure Components**.
  - c. Enter the appropriate configuration data for your configuration, and then click **OK**.
3. To use SNMP, ensure that the SNMP Protocol Tools are selected for installation (default selection).
4. Click **Install**.
5. When prompted, select if you want to save the modified configuration parameters.
6. Click **OK** when the installation completes.
7. Click **Return to Main Menu**, and review the summary of the installed components.
8. Click **Exit>Yes** to exit the utility.

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## **Additional Configuration Settings**

1. At the Red Hat Linux Welcome screen, click **Next**.
2. Read the software license agreement.
3. If you agree with the terms and conditions of the license agreement, select **Yes, I agree to the License Agreement**, and click **Next**.
4. At the Date and Time screen, select the appropriate settings for the server environment, and click **Next**.
5. At the User Account screen, create a personal user account, and click **Next**.
6. At the Red Hat Network screen, register the software product with Red Hat Linux.
7. At the Additional CDs screen, install any additional packages using the Red Hat CDs provided with your server, and then click **Next**.
8. At the Finish Setup screen, click **Next**.
9. Log in to the server when prompted.

After completing the initial Linux configuration procedures, the server completes the boot-up process and is ready to use. For information on administering the Linux operating system or changing the server configuration, refer to the Red Hat Enterprise Linux documentation included with your server.

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## Automatic Partitioning

The following partitions are automatically created on the server:

- The /boot partition is 50 MB.
- The swap partition is two times the total amount of RAM installed in the server.
- The root partition is approximately 10 GB.

The remaining disk space is unpartitioned. For information about creating partitions, refer to the Red Hat Enterprise Linux documentation included with your server.

## Post-Installation Tasks

This section provides instructions for completing recommended tasks after the software installation is complete.

### Changing the Display Settings

To change the default video display settings:

1. Log on to the server as **root**.
2. At the Red Hat Start menu, click **System Settings>Display**.
3. Use the dropdown menus to modify the Resolution and Color Depth appropriately, and then click **OK**.
4. Test the various display settings to determine the appropriate settings for your server.

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## Altering the Regional Settings

If your server is operating in a region other than the operating system default region, you might need to alter the regional settings within Linux. The regional settings control the keyboard language and set the local format for sorting and displaying the time, date, number, and currency for a specified locale.

To alter the regional settings:

1. Log on to the server as `root`.
2. At the Red Hat Start menu, click **System Settings>Date and Time**.
3. Select the **Date and Time** and **Time Zone** tabs, and adjust these settings appropriately for the server environment.
4. Click **OK**.

## Configuring Array Controllers

To configure the array controllers:

1. Log in as `root`.
2. Open a terminal emulation program.
3. If you want to use the Web-based Array Configuration Utility, access the Array Configuration Utility from a local machine by entering `cpqacuxe` at the command prompt. Refer to the “Web-Based Array Configuration Utility” section to complete the array configuration.

If you want to use another configuration method, enter `cpqacuxe -h` at the command prompt to view available configuration options. For more information on using ACU-XE, refer to

<http://h18004.www1.hp.com/products/servers/proliantstorage/software-management/acumatrix/index.html>

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## **Web-Based Array Configuration Utility**

To configure the array controllers using the Web-Based Array Configuration Utility:

1. Open Mozilla, and access <http://127.0.0.1:2301>.
2. If you are prompted about unknown security certificates, click **Continue** or **OK** to proceed.
3. Log in to the Management Agents as an administrator. The System Management Homepage appears.
4. Refer to the *HP Insight Management Agents User Guide* and the README.TXT file located at /opt/Compaq/cpqacuxe for instructions to complete the configuration from the System Management Homepage.

## **Configuring Additional NICs**

If your server has more than one NIC installed, complete the following steps to configure the remaining NICs:

1. Log on to the server as **root**.
2. At the Red Hat Start menu, click **System Settings>Network**.
3. Select the NIC to configure, and click **Edit**.
4. Enter the appropriate network configuration information.
5. Click **OK**.
6. Repeat steps 3 through 5 to configure any remaining NICs.
7. Click **File>Quit** to exit the utility.

## **Installing Additional Options**

You can install additional options after the operating system installation is complete and the server is operational. Follow the instructions provided with the individual software or hardware components you are installing.

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## **Creating an Emergency Boot Diskette**

Creating an emergency boot diskette is highly recommended. If the server fails to boot for some reason, the emergency boot diskette can be used to boot the server.

Complete the following procedures to create an emergency boot diskette:

**NOTE:** Have a 3.5-inch diskette available to serve as the emergency boot diskette.

1. Log on to the server as `root`.
2. Enter the following command at the prompt, then press the **Enter** key:

```
ls /lib/modules
```

One directory appears for each available kernel.

3. Select the appropriate kernel version for the emergency boot diskette.

**IMPORTANT:** Do not use the SMP or Enterprise kernels for the emergency boot diskette.

4. Enter the following command at the prompt, then press the **Enter** key:

```
mkbootdisk --device /dev/fd0 (kernel)
```

where (*kernel*) is the available kernel selected in the previous step.

5. Insert the diskette into the diskette drive, then press the **Enter** key.
6. Remove the diskette when the message appears stating that the emergency boot diskette has been successfully created.
7. Label the diskette as the Emergency Boot Diskette.

## **Powering Down the Server**

The shutdown command must always be entered before powering down the server. To immediately shut down the server:

1. Log on to the server as `root`.
2. Enter the following command at the prompt, then press the **Enter** key:

```
shutdown -h now
```

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## Troubleshooting

If you experience problems with the factory-installed operating system software, refer to the information in the following sections.

## Software Technical Support

Technical support for HP preinstalled third-party software and third-party software purchased from HP is available from the Internet or by telephone for 90 days from the date of purchase.

Telephone support (Software Support Services) includes assistance with:

- Answering installation questions (how-to, first steps, and prerequisites)
- Setting up and configuring the software (how-to and first steps; excludes system optimization, customization, and network configuration)
- Interpreting system error messages
- Isolating system problems to software usage problems
- Obtaining SoftPaq information or updates

For more advanced technical problems, your Red Hat Enterprise Linux ES 3 subscription includes comprehensive HP Customer Support software services and includes the following features:

- Three incidents and resolutions per server for one year
- Phone-based support with 9-to-5 service coverage hours in your local time zone
- Two-hour guaranteed response time

Additional services such as Start-up and Installation Services can be purchased for an additional fee. For information on service upgrades, refer to <http://www.hp.com/hps>.

Free online resources are available for obtaining services and information on your product. Refer to <http://www.hp.com/support>.

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The length of Software Support Services might change, depending on local country legal requirements. After the first 90 days, Software Support Services are available for a fee on all operating software and bundled software provided by HP.

**IMPORTANT:** Support applies only to the original HP hardware and software configuration shipped.

## Reinstalling the Operating System

If the operating system becomes corrupted, reinstall it using the enclosed SmartStart CD, Management CD, and the Red Hat Enterprise Linux ES operating system CDs.

To reinstall the operating system, boot the server from the Red Hat Enterprise Linux ES operating system CD #1 and follow the onscreen installation path instructions. If necessary, create driver diskettes by inserting the SmartStart CD into an existing Linux system and creating punch-out diskettes.

**NOTE:** For information about using SmartStart, refer to the ProLiant Essentials Foundation Pack provided with the server.

Install the Linux PSPs from the SmartStart CD PSP autorun utility, or download and install the latest PSPs from <http://www.hp.com/support/files>.

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## **Getting Help**

You can find more information and other help in the following locations.

### **HP Website**

To access the HP website, log on to the Internet at <http://www.hp.com>.

### **Telephone Numbers**

For technical support:

- In the United States and Canada, call 1-800-652-6672. For continuous quality improvement, calls may be recorded or monitored.
- Outside the United States and Canada, go to the HP website for additional support information at <http://www.hp.com>.